1: J Gen Virol. 1996 Sep;77 (Pt 9):2241-9.

The herpes simplex virus type 1 UL8 protein influences the intracellular localization of the UL52 but not the ICP8 or POL replication proteins in virus-infected cells.

Marsden HS, Cross AM, Francis GJ, Patel AH, MacEachran K, Murphy McVey G, Haydon D, Abbotts A, Stow ND.

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We have developed a panel of 14 monoclonal antibodies (MAbs) to POL, the catalytic subunit of herpes simplex virus type 1 (HSV-1) DNA polymerase encoded by gene UL30, and one MAb to the UL52 protein, another of the seven proteins essential for replication of HSV DNA. The approximate locations of epitopes of the polymerase-specific MAbs were identified using truncated polymerase molecules, and the antibodies were characterized in a number of immunological assays allowing eight different specificities to be recognized. These MAbs, together with a polyclonal antibody raised in rabbits against a third DNA replication protein, ICP8, were used to localize the respective proteins by immunofluorescence in cells infected with wild-type HSV-1 or the DNA replication-defective mutants ambUL8 or 2-2. In BHK cells infected with ambUL8, a mutant with an amber termination codon within the coding region of gene UL8, the UL52 protein did not enter the nucleus, although ICP8 and POL entered the nucleus in a normal fashion. The failure of the UL52 protein to be correctly transported to the nucleus was also observed in both HFL and Vero cells infected with ambUL8. In contrast, UL52 protein was transported to the nucleus in BHK cells infected with wild-type HSV-1 or with 2-2, a mutant lacking a functional UL9 protein.

PMID: 8811024 [PubMed - indexed for MEDLINE]

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1: Marsden HS, Cross AM, Francis GJ, Patel AH, MacEachran K, Murphy M, McVey G, Haydon D, Abbotts A, Stow ND. Related Articles, L

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J Gen Virol. 1996 Sep;77 (Pt 9):2241-9.
PMID: 8811024 [PubMed - indexed for MEDLINE]

2: Barnard EC, Brown G, Stow ND. Related Articles, L

Deletion mutants of the herpes simplex virus type 1 UL8 protein: effect on DNA synthesis and ability to interact with and influence the intracellular localization of the UL5 and UL52 proteins.
Virology. 1997 Oct 13;237(1):97-106.
PMID: 9344911 [PubMed - indexed for MEDLINE]

3: Liptak LM, Uprichard SL, Knipe DM. Related Articles, L

Functional order of assembly of herpes simplex virus DNA replication prote into prereplicative site structures.
J Virol. 1996 Mar;70(3):1759-67.
PMID: 8627698 [PubMed - indexed for MEDLINE]

4: Marsden HS, McLean GW, Barnard EC, Francis GJ, MacEachran K, Murphy M, McVey G, Cross A, Abbotts AP, Stow ND. Related Articles, L

The catalytic subunit of the DNA polymerase of herpes simplex virus type 1 interacts specifically with the C terminus of the UL8 component of the viral helicase-primase complex.
J Virol. 1997 Sep;71(9):6390-7.
PMID: 9261356 [PubMed - indexed for MEDLINE]

5: Bush M, Yager DR, Gao M, Weisshart K, Marcy AI, Coen DM, Knipe DM. Related Articles, L

Correct intranuclear localization of herpes simplex virus DNA polymerase requires the viral ICP8 DNA-binding protein.
J Virol. 1991 Mar;65(3):1082-9.
PMID: 1847437 [PubMed - indexed for MEDLINE]

6: Uprichard SL, Knipe DM. Related Articles, L

Herpes simplex ICP27 mutant viruses exhibit reduced expression of specific DNA replication genes.
J Virol. 1996 Mar;70(3):1969-80.
PMID: 8627723 [PubMed - indexed for MEDLINE]

7: Lukonis CJ, Weller SK. Related Articles, L

Formation of herpes simplex virus type 1 replication compartments by transfection: requirements and localization to nuclear domain 10.
J Virol. 1997 Mar;71(3):2390-9.
PMID: 9032376 [PubMed - indexed for MEDLINE]

☐ **8:** McLean GW, Abbotts AP, Parry ME, Marsden HS, Stow ND. Related Articles, L

The herpes simplex virus type 1 origin-binding protein interacts specifically with the viral UL8 protein.
J Gen Virol. 1994 Oct;75 (Pt 10):2699-706.
PMID: 7931156 [PubMed - indexed for MEDLINE]

☐ **9:** Curtin KD, Knipe DM. Related Articles, L

Altered properties of the herpes simplex virus ICP8 DNA-binding protein in cells infected with ICP27 mutant viruses.
Virology. 1993 Sep;196(1):1-14.
PMID: 8395110 [PubMed - indexed for MEDLINE]

☐ **10:** Hamatake RK, Bifano M, Hurlburt WW, Tenney DJ. Related Articles, L

A functional interaction of ICP8, the herpes simplex virus single-stranded DNA-binding protein, and the helicase-primase complex that is dependent the presence of the UL8 subunit.
J Gen Virol. 1997 Apr;78 (Pt 4):857-65.
PMID: 9129659 [PubMed - indexed for MEDLINE]

☐ **11:** Carrington-Lawrence SD, Weller SK. Related Articles, L

Recruitment of polymerase to herpes simplex virus type 1 replication foci i cells expressing mutant primase (UL52) proteins.
J Virol. 2003 Apr;77(7):4237-47.
PMID: 12634381 [PubMed - indexed for MEDLINE]

☐ **12:** Malik AK, Shao L, Shanley JD, Weller SK. Related Articles, L

Intracellular localization of the herpes simplex virus type-1 origin binding protein, UL9.
Virology. 1996 Oct 15;224(2):380-9.Erratum in: Virology 1997 Jan 6;227(1):268.
PMID: 8874499 [PubMed - indexed for MEDLINE]

☐ **13:** Zhong L, Hayward GS. Related Articles, L

Assembly of complete, functionally active herpes simplex virus DNA replication compartments and recruitment of associated viral and cellular proteins in transient cotransfection assays.
J Virol. 1997 Apr;71(4):3146-60.
PMID: 9060678 [PubMed - indexed for MEDLINE]

☐ **14:** Lukonis CJ, Weller SK. Related Articles, L

Characterization of nuclear structures in cells infected with herpes simplex virus type 1 in the absence of viral DNA replication.
J Virol. 1996 Mar;70(3):1751-8.
PMID: 8627697 [PubMed - indexed for MEDLINE]

☐ **15:** Falkenberg M, Bushnell DA, Elias P, Lehman IR. Related Articles, L

The UL8 subunit of the heterotrimeric herpes simplex virus type 1 helicase primase is required for the unwinding of single strand DNA-binding protei (ICP8)-coated DNA substrates.

J Biol Chem. 1997 Sep 5;272(36):22766-70.
PMID: 9278436 [PubMed - indexed for MEDLINE]

☐ **16:** Stracker TH, Cassell GD, Ward P, Loo YM, van Breukelen B, Carrington-Lawrence SD, Hamatake RK, van der Vliet PC, Weller SK, Melendy T, Weitzman MD. Related Articles, L

The Rep protein of adeno-associated virus type 2 interacts with single-stranded DNA-binding proteins that enhance viral replication.
J Virol. 2004 Jan;78(1):441-53.
PMID: 14671124 [PubMed - indexed for MEDLINE]

☐ **17:** Skaliter R, Lehman IR. Related Articles, L

Rolling circle DNA replication in vitro by a complex of herpes simplex vir type 1-encoded enzymes.
Proc Natl Acad Sci U S A. 1994 Oct 25;91(22):10665-9.
PMID: 7938010 [PubMed - indexed for MEDLINE]

☐ **18:** Thornton KE, Chaudhuri M, Monahan SJ, Grinstead LA, Parris DS. Related Articles, L

Analysis of in vitro activities of herpes simplex virus type 1 UL42 mutant proteins: correlation with in vivo function.
Virology. 2000 Sep 30;275(2):373-90.
PMID: 10998337 [PubMed - indexed for MEDLINE]

☐ **19:** Nimonkar AV, Boehmer PE. Related Articles, L

Role of protein-protein interactions during herpes simplex virus type 1 recombination-dependent replication.
J Biol Chem. 2004 May 21;279(21):21957-65. Epub 2004 Mar 16.
PMID: 15026409 [PubMed - indexed for MEDLINE]

☐ **20:** Uprichard SL, Knipe DM. Related Articles, L

Conformational changes in the herpes simplex virus ICP8 DNA-binding protein coincident with assembly in viral replication structures.
J Virol. 2003 Jul;77(13):7467-76.
PMID: 12805446 [PubMed - indexed for MEDLINE]

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